

CLAIMS

1. A method for controlling one or more of resource-consumption and resource-production associated with a plurality of remote devices, the method comprising the steps of:

generating at least one informational message at a central server related to one or more of

5 resource-consumption by, resource-production by and control of at least one device; and

transmitting the at least one informational message to at least one communication device,

where the at least one communication device enables the taking of at least one action having the

effect of providing a change of one or more of resource-consumption and resource-production

attributed to the at least one device of one or more devices.

10 2. The method of claim 1, wherein the at least one informational message comprises at least

one control signal and wherein the at least one communication device comprises at least one

interface unit, where the interface unit in communication with the one or more devices controls

the at least one device in accordance with the at least one control signal, to take an action having

the effect of providing a change of one or more of resource-consumption and resource-

15 production attributed to the at least one device.

3. The method of claim 1, further comprising the step of:

receiving at least one command at the central server, wherein the at least one command is

related to controlling at least one device and wherein the at least one informational message is

generated based on the at least one command.

20 4. The method of claim 1, wherein the at least one informational message comprises one or

more of a request to adjust the at least one device, an order to adjust the at least one device, price

data associated with the at least one device, change in price data, pricing period data, change in

pricing period data, an incentive for an adjustment in the at least one device, a change in incentive, an incentive period, and change in incentive period.

5. The method of claim 1, wherein a condition triggering the at least one informational message is an anticipated future decrease in available energy to the device.

5 6. The method of claim 5, wherein the condition comprises one or more of an anticipated future shortfall of available energy; a reduction in reserve or standby resource capacity; an energy-generation outage; an energy transmission outage, an energy distribution outage; and a terror or hacker attack on one or more of resource production, resource supply, resource transmission and resource distribution.

10 7. The method of claim 1, wherein the at least one informational message comprises an instruction directed to one or more of activating and deactivating the at least one device.

8. The method of claim 1, wherein the at least one informational message comprises an instruction to adjust the operation of the at least one device wherein the instruction to adjust the operation is directed to one or more of state, use, one or more parameters, one or more set points, 15 operating characteristics, duty cycle, control logic and scheduling of the at least one device.

9. The method of claim 1, wherein the step of transmitting occurs over one or more of a bi-directional communication link; a cellular telephone network; a radio network, a satellite network, a paging network, a power transmission line; an Ethernet network, a packet network, Internet, a meter-reading network and multiple networks.

20 10. The method of claim 1, further comprising the step of:
associating one or more of charges and fees with the control of the at least one device.

11. The method of claim 1, further comprising the step of:

adjusting a bill associated with the at least one device pertaining to controlling the at least one device.

12. The method of claim 3, wherein the at least one command is generated via an Internet interface.

5 13. The method of claim 3, wherein the at least one command is generated in accordance with a user profile.

14. The method of claim 13, wherein the user profile is associated with an entity having an interest in one or more of energy consuming devices, energy transmission devices and energy producing devices.

10 15. The method of claim 13, wherein the user profile is associated with an entity that generates one or more commands.

16. The method of claim 1, wherein the interface unit comprises a plurality of interface units where each interface unit is in communication with at least one remote device.

17. The method of claim 1, wherein the devices comprises one or more of an air-conditioner, boiler, motor starter and heater.

18. The method of claim 1, wherein the devices comprise one or more of a power generator, generator control, automatic transfer switch, fuel cell, photovoltaic cell and wind turbine.

19. The method of claim 1, wherein the interface unit causes the adjustments of one or more of resource-consumption and resource-production attributed to the at least one device in accordance with the at least one informational message.

20. The method of claim 2, wherein the interface unit comprises an energy metric component.

21. The method of claim 3, wherein the at least one command is generated by one or more of a user associated with the at least one device; a supplier of a resource for operating the at least one device; a distributor of a resource for operating the at least one device; and a third party associated with one or more of supply, distribution and consumption of a resource for operating the at least one device.
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22. The method of claim 1, wherein the at least one informational message is generated automatically based on external data associated with the one or more of supply, distribution and consumption of a resource for operating the at least one device.
23. The method of claim 1, further comprising the step of:
- 10 determining an amount of change of one or more of resource-consumption and resource-production attributed to the at least one device as a result of an adjustment of the at least one device.
24. The method of claim 23, wherein the change represents a reduction of resource-consumption.
- 15 25. The method of claim 23, wherein the change represents an increase of supply of a resource capable of being produced by the at least one device.
26. The method of claim 23, wherein the change represents a combination of a reduction of resource-consumption and an increase of resource-production of a resource capable of being produced by the at least one device.
- 20 27. The method of claim 23, wherein data about the amount of change is collected electronically via one or more of a communication link; a cellular telephone network, a radio network, a satellite network, a paging network, an Ethernet network, a packet network, Internet, a power line and multiple networks.

28. The method of claim 23, further comprising the step of:
 - determining that a current or an anticipated price of a resource is greater than a certain value.
29. The method of claim 1, further comprising the step of:
 - 5 determining that the at least one device has been controlled in accordance with the at least one informational message.
30. The method of claim 1, further comprising the step of:
 - restoring the at least one device to a state or condition prior to an adjustment made in response to the at least one informational message.
- 10 31. The method of claim 30, wherein the step of restoring further comprises adjusting one or more of state, use, one or more parameters, one or more set points, operating characteristics, duty cycle, control logic and scheduling of the at least one device.
32. The method of claim 30, wherein the step of restoring is performed after a predetermined period of time.
- 15 33. The method of claim 30, wherein the step of restoring is performed in response to a trigger event.
34. The method of claim 33, wherein the trigger event comprises one or more of a reduction in shortfall of available energy; an increase in reserve or standby resource capacity; a reduction of end of an energy-generation outage; a reduction or end of an energy distribution outage; and a
- 20 reduction or end of a terror or hacker attack on one or more of resource production, resource supply and resource distribution.
35. The method of claim 33, wherein the step of restoring is performed upon receipt of a restoring command.

36. The method of claim 35, wherein the restoring command is automatically generated based on external data associated with one or more of supply, distribution and consumption of a resource associated with operation of the at least one device.

37. The method of claim 1, further comprising the step of:

5 adjusting a bill of a user associated with the one or more devices for one or more of activating, de-activating and controlling the at least one device in accordance with the at least one informational message.

38. The method of claim 1, further comprising the step of:

adjusting a bill associated with the one or more devices for an amount of resource
10 consumption avoided as result of one or more of deactivating and controlling the at least one device.

39. The method of claim 1, further comprising the step of:

adjusting a bill associated with the one or more devices for an amount of supply added as a result of one or more of activating and controlling the at least one device.

15 40. The method of claim 1, further comprising the step of:

generating data for one or more of adjusting a bill and initiating a settlement action associated with the one or more devices for one or more of activating, deactivating and controlling the at least one device in accordance with the at least one informational message.

41. The method of claim 1, further comprising the step of:

20 adjusting a bill associated with the one or more devices for an amount of resource consumption avoided as a result of one or more of deactivating and controlling the at least one device.

42. The method of claim 1, further comprising the step of:

adjusting a bill associated with the one or more devices for an amount of supply added as a result of one or more of activating and controlling the at least one device.

43. The method of claim 1, further comprising the step of:

initiating a settlement action to ensure an accurate amount is paid to an appropriate

5 recipient from an appropriate payer related to one or more of resource-consumption and resource-production.

44. The method of claim 40, further comprising the step of:

initiating a settlement action to ensure a plurality of appropriate amounts is paid to a plurality of appropriate recipients from a plurality of appropriate payers.

10 45. The method of claim 1, further comprising the step of:

compensating a user associated with the at least one device based on a difference between a predetermined baseline and an amount attributed to the change in one or more of resource-consumption and resource-production.

46. The method of claim 45, wherein the step of compensating is performed by crediting the
15 user.

47. The method of claim 45, wherein the baseline comprises an average amount of change of one or more of resource-consumption and resource-production.

48. The method of claim 45, wherein the baseline is adjustable based on one or more of time frame, season, and weather data.

20 49. The method of claim 1, wherein a user accepts an offer generated by the central server wherein the offer comprises an incentive for taking an action at or during a certain time.

50. The method of claim 3, wherein the at least one command comprises an offer from a user associated with the one or more devices to effectuate a change in one or more of consumption and supply of an associated resource for a certain consideration.
51. The method of claim 50, wherein the change in one or more of consumption and supply 5 comprises one or more of a reduction in consumption and an increase in supply of a resource.
52. The method of claim 50, wherein the offer is transmitted to one or more entities.
53. The method of claim 52, wherein at least one of the one or more entities determines whether to accept the offer.
54. The method of claim 50, further comprising the step of:
10 deciding based on one or more of price data, supply data and demand data whether to accept the offer before generating the at least one informational message.
55. The method of claim 2, further comprising the steps of:
generating at least one signal for terminating the action having the effect of providing the change; and
15 transmitting the at least one signal to the at least one interface unit, where the at least one interface unit in communication with the one or more devices controls the at least one device in accordance with the at least one signal, to take an action having the effect of terminating the action having the effect of providing the change.
56. The method of claim 1, further comprising the steps of:
20 generating at least one message regarding termination of the action having the effect of providing the change; and

transmitting the at least one message to the at least one communication device, where the at least one communication device is associated with at least one entity comprising one or more of a user and an owner of the at least one device.

57. The method of claim 56, wherein the at least one communication device is one or more of
5 an email system or device, a pager, a telephone, an SMS or text-messaging device, a mobile computing device, a stationary computing device, a web browser, a server, a software program, a facsimile machine.

58. The method of claim 1, wherein the at least one informational message comprises an order to reduce resource-consumption or increase resource-production associated with the at
10 least one device.

59. The method of claim 3, wherein the at least one command comprises an order to reduce resource-consumption or increase resource-production associated with the at least one device.

60. The method of claim 58, wherein the resource-consumption comprises energy consumption.

15 61. The method of claim 58, wherein the at least one informational message is capable of being overridden by an entity associated with the at least one device.

62. The method of claim 59, wherein the at least one command is capable of being overridden by an entity associated with the at least one device.

63. The method of claim 1, wherein the at least one informational message identifies a level
20 of change from a plurality of levels of change wherein each level of change comprises a different level of one or more of resource-consumption and resource-production.

64. The method of claim 58, further comprising the step of:
assessing one or more of price data, demand data, and supply data to determine the order.

65. The method of claim 1, wherein the at least one informational message is based on a request from an entity requesting one or more of a reduction in resource-consumption and an increase in resource-production by a predetermined amount.
66. The method of claim 65, wherein the predetermined amount comprises an estimated amount based on one or more of demand data, supply data, device data and contract data.
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67. The method of claim 65, wherein the predetermined amount is stored in a user profile.
68. The method of claim 1, wherein the one or more devices comprise one or more energy-related assets.
69. The method of claim 1, wherein the one or more devices are selectively re-adjusted, activated or deactivated subsequent to the one or more device's initial activations, de-activations or adjustments.
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70. The method of claim 69, wherein the one or more devices are selectively re-adjusted, activated or deactivated by at least one command.
71. The method of claim 69, wherein the one or more devices are selectively re-adjusted, activated or deactivated by an additional at least one informational message.
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72. The method of claim 69, wherein the one or more devices may be selectively re-adjusted, activated or deactivated in response to with a message to a communication device associated with at least one intended recipient.
73. The method of claim 1, wherein the at least one informational message is based on a request from a first entity requesting a second entity to select a level of adjustment from a plurality of levels of response involving the second entity reducing resource-consumption or increasing resource-production.
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74. The method of claim 3, wherein the at least one command comprises a request from a first entity requesting a second entity to select a level of adjustment from a plurality of levels of response involving the second entity reducing resource-consumption or increasing resource-production.
- 5 75. The method of claim 73, wherein the levels of adjustment comprise one or more of no adjustment and some adjustment.
76. The method of claim 73, wherein each level of adjustment has a corresponding incentive.
77. The method of claim 73, wherein the first entity comprises a supplier of a resource for operating the at least one device.
- 10 78. The method of claim 1, wherein the at least one informational message is based on a request from a first entity requesting one or more of a reduction in resource-consumption and an increase in resource-production where a level of adjustment concerning one or more of resource-consumption or resource production is calculated for the second entity based on a user profile.
79. The method of claim 3, wherein the at least one command comprises a request from a first entity requesting one or more of a reduction in resource-consumption and an increase in resource-production where a level of adjustment concerning one or more of resource-consumption or resource production is calculated for the second entity based on a user profile.
- 15 80. The method of claim 1, where the at least one informational message is based on a request from a first entity requesting one or more of a reduction in resource-consumption and an increase in resource-production where a level of adjustment concerning one or more of resource-consumption or resource production is calculated for the second entity based on an overall target demand or supply goal for a plurality of entities.

81. The method of claim 3, where the at least one command comprises a request from a first entity requesting one or more of a reduction in resource-consumption and an increase in resource-production where a level of adjustment concerning one or more of resource-consumption or resource production is calculated for the second entity based on an overall target demand or supply goal for a plurality of entities.
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82. The method of claim 80, wherein the second entity decides how the level of adjustment is distributed throughout the one or more devices.
83. The method of claim 80, wherein the second entity decides the one or more devices to be adjusted and an order of adjustment for the one or more devices.
- 10 84. The method of claim 83, wherein an estimated amount of adjustment of each of the one or more devices is determined.
85. The method of claim 81, wherein the second entity decides how the level of adjustment is distributed throughout the one or more devices.
86. The method of claim 81, wherein the second entity decides the one or more devices to be adjusted and an order of adjustment for the one or more devices.
- 15
87. The method of claim 1, wherein the at least one informational message is based on a request from an entity requesting one or more of a reduction in resource-consumption and an increase in resource-production by a predetermined amount for an incentive.
88. The method of claim 3, wherein the at least one command comprises a request from an entity requesting one or more of a reduction in resource-consumption and an increase in resource-production by a predetermined amount for an incentive.
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89. The method of claim 87, wherein a user associated with the one or more devices determines an amount of one or more of resource-consumption and resource-production in response to the incentive.

90. The method of claim 87, wherein the resource-consumption comprises energy
5 consumption.

91. The method of claim 1, further comprising the step of:

transmitting a notification message to the at least one communication device wherein the notification message informs one or more intended recipients of delivery or non-delivery of the at least one informational message.

10 92. The method of claim 3, further comprising the step of:
transmitting a notification message to the at least one communication device wherein the notification message informs one or more intended recipients about the change in one or more of resource consumption and resource production.

93. The method of claim 1, further comprising the step of:
15 calculating an amount of the change in one or more of resource-consumption and resource-production attributed to an entity for a specific adjustment; and
storing the amount of the change in a database.

94. The method of claim 93, wherein the amount comprises one or more of an actual amount, estimated amount, measured amount, calculated amount, approximated amount, sampled
20 amount, standardized amount, predetermined amount, extrapolated amount and interpolated amount.

95. The method of claim 1, further comprising the step of:

calculating a potential amount of the change in one or more of resource-consumption and resource-production for a given level of adjustment attributed to an entity; and
storing the potential amount in a database.

96. The method of claim 1, wherein each unit of change in one or more of resource-
5 consumption and resource-production within a defined area resulting from the action determines
an amount of compensation.

97. The method of claim 96, wherein the unit of change in one or more of resource-
consumption and resource-production is a predetermined number of kilowatts or kilowatt-hours
of energy.

10 98. The method of claim 1, further comprising the step of:
enabling a user to trade, buy or sell an amount of one or more of the change of resource-
consumption and resource-production via a trading system wherein the change comprises one or
more of current change, future change and prior change.

99. The method of claim 1, further comprising the step of:
15 enabling a user to accept one or more bids from one or more entities for an amount of
change of one or more of the change of resource-consumption and resource-production.

100. The method of claim 1, further comprising the step of:
enabling a user to offer a projected amount of change of one or more of resource-
consumption and resource-production wherein the at least one informational message is
20 generated based on the projected amount.

101. The method of claim 100, wherein the one or more entities comprise one or more of other
users, one or more resource providers, one or more resource transmission entities, one or more
resource distribution entities, trading entities, and an entity associated with the central server.

102. The method of claim 1, further comprising the step of:
 - defining one or more conditions concerning bid acceptance from one or more entities for an adjustment in one or more of resource-consumption and resource-production.
103. The method of claim 1, further comprising the steps of:
 - 5 assessing a consumption amount of one or more resources associated with operation of one or more devices; and
 - assessing a supply amount of the one or more resources.
104. The method of claim 103, wherein the consumption amount comprises aggregate consumption data associated with a plurality of devices.
- 10 105. The method of claim 103, wherein the consumption amount comprises one or more of current consumption, theoretical consumption, anticipated consumption, a steady-state consumption for a predetermined time frame, a peak consumption for a predetermined time frame and an average consumption for a predetermined time frame.
106. The method of claim 103, wherein the consumption amount is extrapolated from a 15 plurality of devices contributing to aggregate consumption within a predefined area.
107. The method of claim 106, wherein the plurality of devices comprise a combination of the one or more devices in communication with the at least one communication device and other devices.
108. The method of claim 103, further comprising the step of:
 - 20 adjusting one or more of the resource-consumption and resource-production of the one or more devices based on the assessed consumption amount varying from the assessed supply amount by a predetermined amount.

109. The method of claim 108, wherein the assessed consumption amount comprises aggregate consumption data from a plurality of devices.

110. The method of claim 1, further comprising the step of:
assessing price data associated with one or more resources associated with the operation

5 of the one or more devices; wherein the price data is considered in generating the at least one informational message.

111. The method of claim 110, wherein the price data is compared to at least one predetermined price threshold.

112. The method of claim 111, wherein the at least one predetermined price threshold is stored
10 in a user profile.

113. The method of claim 1, further comprising the steps of:
monitoring a plurality of devices; and
determining a plurality of price data based at least in part on the step of monitoring data
wherein the plurality of price data is considered in generating the at least one informational
15 message.

114. The method of claim 113, wherein the plurality of devices comprise one or more of resource transmission equipment, resource distribution equipment, the one or more devices and meter devices.

115. The method of claim 3, further comprising the steps of:
20 monitoring a plurality of devices; and
determining a plurality of price data based at least in part on the step of monitoring data
wherein the plurality of price data is considered in generating the at least one command.

116. The method of claim 1, further comprising the step of:

assessing price data associated with one or more resources associated with the operation of the one or more devices; wherein the price data is considered in one or more of activating, deactivating, controlling, and not controlling the at least one device.

117. The method of claim 1, further comprising the step of:

5 assessing forecast data of one or more of consumption amount and supply amount associated with one or more resources associated with the operation of the one or more devices; wherein the assessed forecast data is considered in generating the at least one informational message.

118. The method of claim 1, further comprising the step of:

10 assessing device function data associated with the operation of the one or more devices; wherein the assessed device function data is considered in generating the at least one informational message.

119. The method of claim 118, wherein the device function data comprises one or more of cost data in operating a device, cost data of one or more resources for operating the device, 15 information regarding an ability to adjust one or more of resource-consumption and resource-production by the at least one device and priority of controlling the devices in relation to other devices.

120. The method of claim 1, further comprising the step of:

assessing weather condition data affecting the operation of the one or more devices; 20 wherein the assessed weather condition data is considered in generating the at least one informational message.

121. The method of claim 1, further comprising the step of:

- assessing user profile data associated with the operation of the one or more devices;
wherein the assessed user profile data is considered in generating the at least one informational message.
122. The method of claim 121, wherein the user profile data comprises data representing one or more of an average demand and an average supply.
123. The method of claim 1, further comprising the step of:
assessing one or more event conditions comprising one or more of power reduction warnings; national, region or local security warnings; power or energy shortage warnings; terrorist attacks; power outages; equipment outages; power system restoration; wherein the 10 assessed one or more event conditions is considered in generating the at least one informational message.
124. The method of claim 1, further comprising the step of:
identifying one or more energy curtailment mandates from an entity; wherein the one or more energy curtailment mandates is considered in generating the at least one informational 15 message.
125. The method of claim 124, wherein the mandates are self-imposed.
126. The method of claim 1, further comprising the step of:
balancing the operation of the one or more devices based at least in part on one or more of the consumption amount and the assessed supply amount.
- 20 127. The method of claim 126, further comprising the step of:
balancing the operation of one or more devices among one or more entities.
128. The method of claim 1, further comprising the steps of:

receiving feedback data in response to transmission of the at least one informational message; and
generating at least one additional informational message in accordance with the feedback data.

- 5 129. The method of claim 1, further comprising the steps of:
receiving feedback data in response to an adjustment of the at least one device; and
re-adjusting operation of one or more devices based at least in part on the feedback data.
130. The method of claim 1, further comprising the steps of:
receiving feedback data in response to an adjustment of the at least one device;
10 generating at least one message based on the received feedback data; and
transmitting the at least one message to the at least one communication device, wherein
the at least one communication device is associated with at least one recipient.
131. The method of claim 129, wherein the step of re-adjusting is performed in response to an additional at least one informational message.
- 15 132. The method of claim 129, wherein the step of re-adjusting comprises one or more of activating, de-activating and controlling the one or more devices.
133. The method of claim 129, wherein the feedback data comprises one or more of device level data and user level data.
134. The method of claim 129, wherein the feedback data comprises aggregate data among a
20 plurality of entities.
135. The method of claim 129, wherein the feedback data comprises aggregate data independent of specific entities.

136. The method of claim 129, wherein the step of re-adjusting further comprises adjusting an incentive associated with the adjustment of the at least one device.

137. The method of claim 129, wherein the step of re-adjusting further comprises adjusting a price associated with a resource associated with operation of the at least one device.

5 138. The method of claim 1, further comprising the step of:

measuring at least one performance metric of the one or more devices;

predicting future performance of the one or more devices based on the step of measuring;

and

generating the at least one informational message based at least in part on the predicted

10 future performance.

139. The method of claim 138, wherein the at least one performance metric comprises one or more of state characteristics, parameters and operating characteristics and wherein the future performance comprises one or more of future resource-consumption and future resource-production.

15 140. The method of claim 1, further comprising the steps of:

monitoring one or more devices associated with a user, the user having a user profile

identifying the one or more devices; and

automatically generating the at least one informational message based at least in part on the step of monitoring.

20 141. The method of claim 1, further comprising the steps of:

identifying at least one trigger condition for automatically initiating adjustment of one or more of resource-consumption and resource-production of the at least one device, wherein the

adjustment is directed to one or more of state, use, parameter, set points, operating characteristics, duty cycle, control logic and schedule associated with the at least one device; and generating the at least one informational message in response to an occurrence of the at least one trigger condition.

- 5 142. The method of claim 141, wherein the at least one trigger condition comprises a predetermined trigger condition defined by the user.
143. The method of claim 141, wherein the at least one trigger condition comprises a predetermined schedule of adjustments in the one or more of resource-consumption and resource-production of the at least one device.
- 10 144. The method of claim 141, wherein the at least one trigger condition comprises a predetermined weather condition where an occurrence of the predetermined weather condition triggers an automatic adjustment in one or more of resource-consumption and resource-production of the at least one device.
145. The method of claim 141, wherein the at least one trigger condition comprises a warning message of an imminent event forcing power adjustment.
146. The method of claim 141, wherein the at least one trigger condition comprises a predetermined condition involving one or more of real-time, near real-time, forward and anticipated pricing data.
147. The method of claim 146, wherein the price data comprises market price data.
- 20 148. The method of claim 141, wherein the at least one trigger condition comprises a predetermined condition involving one or more of time of day, day of week, and season data.
149. The method of claim 141, wherein the at least one trigger condition comprises a predetermined condition involving current surplus and deficit resource availability data.

150. The method of claim 141, wherein the at least one trigger condition comprises a predetermined condition involving forecasted surplus and deficit capacity data.

151. The method of claim 141, wherein the at least one trigger condition comprises a predetermined condition involving a change in price of a resource with respect to a 5 predetermined threshold.

152. The method of claim 3, wherein the at least one command is from a user associated with the at least one device, the user having an associated user profile.

153. The method of claim 152, wherein the user profile defines in whole or in part an agreement between the user and an entity associated with the central server concerning a right to 10 control of the one or more devices.

154. The method of claim 152, wherein an entity reserves a right to overrule rights associated with the user in operation of the one or more devices or in response to an event.

155. The method of claim 152, wherein the user defines or modifies all or in part one or more of the user profile and a profile in which the user has been assigned one or more rights.

156. The method of claim 155, wherein the user performs the defining or the modifying over 15 the Internet.

157. The method of claim 152, wherein the user makes available all or part of the user profile in connection with participation in a resource trading network or exchange.

158. The method of claim 157, wherein the user shares data associated with the user profile 20 with other users.

159. The method of claim 1, wherein at least one predetermined rule is related to controlling the at least one device.

160. The method of claim 159, wherein the at least one predetermined rule is defined by a user associated with the one or more devices.
161. The method of claim 159, wherein the at least one predetermined rule is defined at a user interface via the Internet.
- 5 162. The method of claim 159, wherein the at least one predetermined rule is stored in a user profile associated with a user.
163. The method of claim 159, wherein the at least one predetermined rule comprises one or more situational rules where each situational rule is applicable for an identified circumstance.
- 10 164. The method of claim 159, wherein the at least one predetermined rule comprises a predetermined rule specific for one or more devices.
165. The method of claim 159, wherein the at least one predetermined rule varies in accordance with feedback data.
166. The method of claim 165, wherein the at least one predetermined rule varies situationally.
167. The method of claim 165, wherein the at least one predetermined rule varies dynamically.
- 15 168. The method of claim 159, wherein the at least one informational message is generated in accordance with the at least one predetermined rule.
169. The method of claim 168, wherein the at least one predetermined rule is directed to controlling one or more of one or more of state, use, one or more parameters, one or more set points, operating characteristics, duty cycle, control logic and scheduling of the one or more devices.
- 20 170. The method of claim 169, wherein the at least one predetermined rule identifies how the one or more devices are monitored.

171. The method of claim 169, wherein the user defined rules comprise multiple levels of control or adjustment concerning the one or more devices.
172. The method of claim 1, wherein the at least one informational message initiates one or more actions involving activating and deactivating the at least one device or one or more components associated with the at least one device.
 - 5
173. The method of claim 1, wherein the at least one informational message initiates one or more actions involving changing a plurality of set points; changing a plurality of parameters; changing one or more inputs to the at least one device; changing state of the at least one device; reducing an amount of resource supplied to the at least one device over a predefined time period;
 - 10
174. The method of claim 169, wherein the at least one predetermined rule identifies one or more of when and how one or more adjustments to one or more of resource-consumption and resource-production of the at least one device are made.
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175. The method of claim 1, further comprising the steps of:
 - 176.

identifying a user type; and

operating the one or more devices in a mode based on the user type during a predetermined event.
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176. The method of claim 1, further comprising the steps of:
 - 177.

receiving confirmation of the action taken; and

informing one or more recipients of the confirmed action taken.
 - 25

177. The method of claim 176, wherein the step of informing comprises the steps of:
 - generating at least one message based on the confirmation; and
 - transmitting the at least one message to the at least one communication device, wherein the at least one communication device is associated with at least one intended recipient.
- 5 178. The method of claim 1, further comprising the steps of:
 - identifying one or more devices that fail to take an action in accordance with the at least one informational message ; and
 - informing one or more recipients of the identified one or more devices.
- 10 179. The method of claim 178, wherein the step of informing further comprises the steps of:
 - generating at least one message based on the step of identifying; and
 - transmitting the at least one message to the at least one communication device, wherein the at least one communication device is associated with at least one intended recipient.
- 15 180. A system for controlling one or more of resource-consumption and resource-production associated with a plurality of remote devices, the system comprising:
 - a central server that generates at least one informational message related to one or more of resource-consumption by, resource-production by and control of at least one device of one or more devices; and
 - a communication link that transmits the at least one informational message to at least one communication device, where the at least one communication device enables the taking of at least one action having the effect of providing a change of one or more of resource-consumption and resource-production attributed to the at least one device.
- 20 181. The system of claim 180, wherein the at least one informational message comprises at least one control signal and wherein the at least one communication device comprises at least

one interface unit, where the interface unit in communication with the one or more devices controls the at least one device in accordance with the at least one control signal, to take an action having the effect of providing a change of one or more of resource-consumption and resource-production attributed to the at least one device.

5 182. The system of claim 180, wherein the central server receives at least one command, wherein the at least one command is related to controlling at least one device and wherein the at least one informational message is generated based on the at least one command.

183. The system of claim 180, wherein the at least one informational message comprises one or more of a request to adjust the at least one device, an order to adjust the at least one device, 10 price data associated with the at least one device, change in price data, pricing period data, change in pricing period data, an incentive for an adjustment in the at least one device, a change in incentive, an incentive period, and change in incentive period.

184. The system of claim 180, wherein a condition triggering the at least one informational message is an anticipated future decrease in available energy to the device.

15 185. The system of claim 184, wherein the condition comprises one or more of an anticipated future shortfall of available energy; a reduction in reserve or standby resource capacity; an energy-generation outage; an energy transmission outage, an energy distribution outage; and a terror or hacker attack on one or more of resource production, resource supply, resource transmission and resource distribution.

20 186. The system of claim 180, wherein the at least one informational message comprises an instruction directed to one or more of activating and deactivating the at least one device.

187. The system of claim 180, wherein the at least one informational message comprises an instruction to adjust the operation of the at least one device wherein the instruction to adjust the

operation is directed to one or more of state, use, one or more parameters, one or more set points, operating characteristics, duty cycle, control logic and scheduling of the at least one device.

188. The system of claim 180, wherein the step of transmitting occurs over one or more of a bi-directional communication link; a cellular telephone network; a radio network, a satellite network, a paging network, a power transmission line; an Ethernet network, a packet network, Internet, a meter-reading network and multiple networks.

5 189. The system of claim 180, further comprising:

a billing module that associates one or more of charges and fees with the control of the at least one device.

10 190. The system of claim 180, further comprising:

a billing module that adjusts a bill associated with the at least one device pertaining to controlling the at least one device.

191. The system of claim 182, wherein the at least one command is generated via an Internet interface.

15 192. The system of claim 182, wherein the at least one command is generated in accordance with a user profile.

193. The system of claim 192, wherein the user profile is associated with an entity having an interest in one or more of energy consuming devices, energy transmission devices and energy producing devices.

20 194. The system of claim 192, wherein the user profile is associated with an entity that generates one or more commands.

195. The system of claim 180, wherein the interface unit comprises a plurality of interface units where each interface unit is in communication with at least one remote device.

196. The system of claim 180, wherein the devices comprises one or more of an air-conditioner, boiler, motor starter and heater.

197. The system of claim 180, wherein the devices comprise one or more of a power generator, generator control, automatic transfer switch, fuel cell, photovoltaic cell and wind 5 turbine.

198. The system of claim 180, wherein the interface unit causes the adjustments of one or more of resource-consumption and resource-production attributed to the at least one device in accordance with the at least one informational message.

199. The system of claim 181, wherein the interface unit comprises an energy metric 10 component.

200. The system of claim 182, wherein the at least one command is generated by one or more of a user associated with the at least one device; a supplier of a resource for operating the at least one device; a distributor of a resource for operating the at least one device; and a third party associated with one or more of supply, distribution and consumption of a resource for operating 15 the at least one device.

201. The system of claim 180, wherein the at least one informational message is generated automatically based on external data associated with the one or more of supply, distribution and consumption of a resource for operating the at least one device.

202. The system of claim 180, further comprising:
20 a determining module that determines an amount of change of one or more of resource-consumption and resource-production attributed to the at least one device as a result of an adjustment of the at least one device.

203. The system of claim 202, wherein the change represents a reduction of resource-consumption.
204. The system of claim 202, wherein the change represents an increase of supply of a resource capable of being produced by the at least one device.
- 5 205. The system of claim 202, wherein the change represents a combination of a reduction of resource-consumption and an increase of resource-production of a resource capable of being produced by the at least one device.
206. The system of claim 202, wherein data about the amount of change is collected electronically via one or more of a communication link; a cellular telephone network, a radio
- 10 network, a satellite network, a paging network, an Ethernet network, a packet network, Internet, a power line and multiple networks.
207. The system of claim 202, further comprising:
a determining module that determines that a current or an anticipated price of a resource is greater than a certain value.
- 15 208. The system of claim 180, further comprising:
a determining module that determines that the at least one device has been controlled in accordance with the at least one informational message.
209. The system of claim 180, further comprising:
a command module that restores the at least one device to a state or condition prior to an
- 20 adjustment made in response to the at least one informational message.
210. The system of claim 209, wherein the command module restores one or more of state, use, one or more parameters, one or more set points, operating characteristics, duty cycle, control logic and scheduling of the at least one device.

211. The system of claim 209, wherein the restoring is performed after a predetermined period of time.

212. The system of claim 209, wherein the restoring is performed in response to a trigger event.

5 213. The system of claim 212, wherein the trigger event comprises one or more of a reduction in shortfall of available energy; an increase in reserve or standby resource capacity; a reduction of end of an energy-generation outage; a reduction or end of an energy distribution outage; and a reduction or end of a terror or hacker attack on one or more of resource production, resource supply and resource distribution.

10 214. The system of claim 212, wherein the restoring is performed upon receipt of a restoring command.

215. The system of claim 214, wherein the restoring command is automatically generated based on external data associated with one or more of supply, distribution and consumption of a resource associated with operation of the at least one device.

15 216. The system of claim 180, further comprising:

a billing module that adjusts a bill of a user associated with the one or more devices for one or more of activating, de-activating and controlling the at least one device in accordance with the at least one informational message.

217. The system of claim 180, further comprising:

20 a billing module that adjust a bill associated with the one or more devices for an amount of resource consumption avoided as result of one or more of deactivating and controlling the at least one device.

218. The system of claim 180, further comprising:

a billing module that adjusts a bill associated with the one or more devices for an amount of supply added as a result of one or more of activating and controlling the at least one device.

219. The system of claim 180, further comprising:

a billing module that generates data for one or more of adjusting a bill and initiating a
5 settlement action associated with the one or more devices for one or more of activating,
deactivating and controlling the at least one device in accordance with the at least one
informational message.

220. The system of claim 180, further comprising:

a billing module that adjusts a bill associated with the one or more devices for an amount
10 of resource consumption avoided as a result of one or more of deactivating and controlling the at
least one device.

221. The system of claim 180, further comprising:

a billing module that adjusts a bill associated with the one or more devices for an amount
of supply added as a result of one or more of activating and controlling the at least one device.

15 222. The system of claim 180, further comprising:

a settlement module that initiates a settlement action to ensure an accurate amount is paid
to an appropriate recipient from an appropriate payer related to one or more of resource-
consumption and resource-production.

223. The system of claim 219, further comprising:

20 a settlement module that initiates a settlement action to ensure a plurality of appropriate
amounts is paid to a plurality of appropriate recipients from a plurality of appropriate payers.

224. The system of claim 180, further comprising:

a credit module that compensates a user associated with the at least one device based on a difference between a predetermined baseline and an amount attributed to the change in one or more of resource-consumption and resource-production.

225. The system of claim 224, wherein the compensating is performed by crediting the user.

5 226. The system of claim 224, wherein the baseline comprises an average amount of change of one or more of resource-consumption and resource-production.

227. The system of claim 224, wherein the baseline is adjustable based on one or more of time frame, season, and weather data.

228. The system of claim 180, wherein a user accepts an offer generated by the central server 10 wherein the offer comprises an incentive for taking an action at or during a certain time.

229. The system of claim 182, wherein the at least one command comprises an offer from a user associated with the one or more devices to effectuate a change in one or more of consumption and supply of an associated resource for a certain consideration.

230. The system of claim 229, wherein the change in one or more of consumption and supply 15 comprises one or more of a reduction in consumption and an increase in supply of a resource.

231. The system of claim 229, wherein the offer is transmitted to one or more entities.

232. The system of claim 231, wherein at least one of the one or more entities determines whether to accept the offer.

233. The system of claim 229, further comprising:

20 a decision module that decides based on one or more of price data, supply data and demand data whether to accept the offer before generating the at least one informational message.

234. The system of claim 181, wherein at least one signal is generated for terminating the action having the effect of providing the change; and the at least one signal is transmitted to the at least one interface unit, where the at least one interface unit in communication with the one or more devices controls the at least one device in accordance with the at least one signal, to take an action having the effect of terminating the action having the effect of providing the change.
- 5
235. The system of claim 179, wherein at least one message is generated regarding termination of the action having the effect of providing the change; and the at least one message is transmitted to the at least one communication device, where the at least one communication device is associated with at least one entity comprising one or more of a user and an owner of the 10 at least one device.
- 10
236. The system of claim 235, wherein the at least one communication device is one or more of an email system or device, a pager, a telephone, an SMS or text-messaging device, a mobile computing device, a stationary computing device, a web browser, a server, a software program, a facsimile machine.
- 15
237. The system of claim 180, wherein the at least one informational message comprises an order to reduce resource-consumption or increase resource-production associated with the at least one device.
238. The system of claim 182, wherein the at least one command comprises an order to reduce resource-consumption or increase resource-production associated with the at least one device.
- 20
239. The system of claim 237, wherein the resource-consumption comprises energy consumption.
240. The system of claim 237, wherein the at least one informational message is capable of being overridden by an entity associated with the at least one device.

241. The system of claim 238, wherein the at least one command is capable of being overridden by an entity associated with the at least one device.
242. The system of claim 180, wherein the at least one informational message identifies a level of change from a plurality of levels of change wherein each level of change comprises a different level of one or more of resource-consumption and resource-production.
5
243. The system of claim 237, wherein one or more of price data, demand data, and supply data are assessed to determine the order.
244. The system of claim 180, wherein the at least one informational message is based on a request from an entity requesting one or more of a reduction in resource-consumption and an increase in resource-production by a predetermined amount.
10
245. The system of claim 244, wherein the predetermined amount comprises an estimated amount based on one or more of demand data, supply data, device data and contract data.
246. The system of claim 244, wherein the predetermined amount is stored in a user profile.
247. The system of claim 180, wherein the one or more devices comprise one or more energy-related assets.
15
248. The system of claim 180, wherein the one or more devices are selectively re-adjusted, activated or deactivated subsequent to the one or more device's initial activations, de-activations or adjustments.
249. The system of claim 248, wherein the one or more devices are selectively re-adjusted, activated or deactivated by at least one command.
20
250. The system of claim 248, wherein the one or more devices are selectively re-adjusted, activated or deactivated by an additional at least one informational message.

251. The system of claim 248, wherein the one or more devices may be selectively re-adjusted, activated or deactivated in response to with a message to a communication device associated with at least one intended recipient.

252. The system of claim 180, wherein the at least one informational message is based on a request from a first entity requesting a second entity to select a level of adjustment from a plurality of levels of response involving the second entity reducing resource-consumption or increasing resource-production.

253. The system of claim 182, wherein the at least one command comprises a request from a first entity requesting a second entity to select a level of adjustment from a plurality of levels of response involving the second entity reducing resource-consumption or increasing resource-production.

254. The system of claim 252, wherein the levels of adjustment comprise one or more of no adjustment and some adjustment.

255. The system of claim 252, wherein each level of adjustment has a corresponding incentive.

256. The system of claim 252, wherein the first entity comprises a supplier of a resource for operating the at least one device.

257. The system of claim 180, wherein the at least one informational message is based on a request from a first entity requesting one or more of a reduction in resource-consumption and an increase in resource-production where a level of adjustment concerning one or more of resource-consumption or resource production is calculated for the second entity based on a user profile.

258. The system of claim 182, wherein the at least one command comprises a request from a first entity requesting one or more of a reduction in resource-consumption and an increase in

resource-production where a level of adjustment concerning one or more of resource-consumption or resource production is calculated for the second entity based on a user profile.

259. The system of claim 180, where the at least one informational message is based on a request from a first entity requesting one or more of a reduction in resource-consumption and an increase in resource-production where a level of adjustment concerning one or more of resource-consumption or resource production is calculated for the second entity based on an overall target demand or supply goal for a plurality of entities.

260. The system of claim 182, where the at least one command comprises a request from a first entity requesting one or more of a reduction in resource-consumption and an increase in resource-production where a level of adjustment concerning one or more of resource-consumption or resource production is calculated for the second entity based on an overall target demand or supply goal for a plurality of entities.

261. The system of claim 259, wherein the second entity decides how the level of adjustment is distributed throughout the one or more devices.

262. The system of claim 259, wherein the second entity decides the one or more devices to be adjusted and an order of adjustment for the one or more devices.

263. The system of claim 262, wherein an estimated amount of adjustment of each of the one or more devices is determined.

264. The system of claim 260, wherein the second entity decides how the level of adjustment is distributed throughout the one or more devices.

265. The system of claim 260, wherein the second entity decides the one or more devices to be adjusted and an order of adjustment for the one or more devices.

266. The system of claim 180, wherein the at least one informational message is based on a request from an entity requesting one or more of a reduction in resource-consumption and an increase in resource-production by a predetermined amount for an incentive.
267. The system of claim 182, wherein the at least one command comprises a request from an entity requesting one or more of a reduction in resource-consumption and an increase in resource-production by a predetermined amount for an incentive.
- 5 268. The system of claim 266, wherein a user associated with the one or more devices determines an amount of one or more of resource-consumption and resource-production in response to the incentive.
- 10 269. The system of claim 266, wherein the resource-consumption comprises energy consumption:
270. The system of claim 180, further comprising:
a transmitting module that transmits a notification message to the at least one communication device wherein the notification message informs one or more intended recipients 15 of delivery or non-delivery of the at least one informational message.
271. The system of claim 182, further comprising:
a transmitting module that transmits a notification message to the at least one communication device wherein the notification message informs one or more intended recipients about the change in one or more of resource consumption and resource production.
- 20 272. The system of claim 180, further comprising:
determining module that calculates an amount of the change in one or more of resource-consumption and resource-production attributed to an entity for a specific adjustment; and
a database that stores the amount of the change.

273. The system of claim 272, wherein the amount comprises one or more of an actual amount, estimated amount, measured amount, calculated amount, approximated amount, sampled amount, standardized amount, predetermined amount, extrapolated amount and interpolated amount.

5 274. The system of claim 180, further comprising:

a determining module that calculates a potential amount of the change in one or more of resource-consumption and resource-production for a given level of adjustment attributed to an entity; and

a database that stores the potential amount.

10 275. The system of claim 180, wherein each unit of change in one or more of resource-consumption and resource-production within a defined area resulting from the action determines an amount of compensation.

276. The system of claim 275, wherein the unit of change in one or more of resource-consumption and resource-production is a predetermined number of kilowatts or kilowatt-hours 15 of energy.

277. The system of claim 180, further comprising:

a trade module that enables a user to trade, buy or sell an amount of one or more of the change of resource-consumption and resource-production via a trading system wherein the change comprises one or more of current change, future change and prior change.

20 278. The system of claim 180, further comprising:

a bidding module that enables a user to accept one or more bids from one or more entities for an amount of change of one or more of the change of resource-consumption and resource-production.

279. The system of claim 180, further comprising:

a trade module that enables a user to offer a projected amount of change of one or more of resource-consumption and resource-production wherein the at least one informational message is generated based on the projected amount.

5 280. The system of claim 279, wherein the one or more entities comprise one or more of other users, one or more resource providers, one or more resource transmission entities, one or more resource distribution entities, trading entities, and an entity associated with the central server.

281. The system of claim 180, wherein one or more conditions are defined concerning bid acceptance from one or more entities for an adjustment in one or more of resource-consumption
10 and resource-production.

282. The system of claim 180, further comprising:

a consumption module that assesses a consumption amount of one or more resources associated with operation of one or more devices; and

a supply module that assesses a supply amount of the one or more resources.

15 283. The system of claim 282, wherein the consumption amount comprises aggregate consumption data associated with a plurality of devices.

284. The system of claim 282, wherein the consumption amount comprises one or more of current consumption, theoretical consumption, anticipated consumption, a steady-state consumption for a predetermined time frame, a peak consumption for a predetermined time
20 frame and an average consumption for a predetermined time frame.

285. The system of claim 282, wherein the consumption amount is extrapolated from a plurality of devices contributing to aggregate consumption within a predefined area.

286. The system of claim 285, wherein the plurality of devices comprise a combination of the one or more devices in communication with the at least one communication device and other devices.

287. The system of claim 282, further comprising:

5 an adjustment module that adjusts one or more of the resource-consumption and resource-production of the one or more devices based on the assessed consumption amount varying from the assessed supply amount by a predetermined amount.

288. The system of claim 287, wherein the assessed consumption amount comprises aggregate consumption data from a plurality of devices.

10 289. The system of claim 180, further comprising:

a market module that assesses price data associated with one or more resources associated with the operation of the one or more devices; wherein the price data is considered in generating the at least one informational message.

290. The system of claim 289, wherein the price data is compared to at least one 15 predetermined price threshold.

291. The system of claim 290, wherein the at least one predetermined price threshold is stored in a user profile.

292. The system of claim 180, further comprising:

20 a monitor module that monitors a plurality of devices and determines a plurality of price data based at least in part on the step of monitoring data wherein the plurality of price data is considered in generating the at least one informational message.

293. The system of claim 292, wherein the plurality of devices comprise one or more of resource transmission equipment, resource distribution equipment, the one or more devices and meter devices.

294. The system of claim 182, further comprising:

5 a monitor module that monitors a plurality of devices and determines a plurality of price data based at least in part on the step of monitoring data wherein the plurality of price data is considered in generating the at least one command.

295. The system of claim 180, further comprising:

10 a market module that assesses price data associated with one or more resources associated with the operation of the one or more devices; wherein the price data is considered in one or more of activating, deactivating, controlling, and not controlling the at least one device.

296. The system of claim 180, further comprising:

15 a forecast module that assesses forecast data of one or more of consumption amount and supply amount associated with one or more resources associated with the operation of the one or more devices; wherein the assessed forecast data is considered in generating the at least one informational message.

297. The system of claim 180, further comprising:

20 a device module that assesses device function data associated with the operation of the one or more devices; wherein the assessed device function data is considered in generating the at least one informational message.

298. The system of claim 297, wherein the device function data comprises one or more of cost data in operating a device, cost data of one or more resources for operating the device, information regarding an ability to adjust one or more of resource-consumption and resource-

production by the at least one device and priority of controlling the devices in relation to other devices.

299. The system of claim 180, further comprising:

a weather module that assesses weather condition data affecting the operation of the one or more devices; wherein the assessed weather condition data is considered in generating the at least one informational message.

300. The system of claim 180, further comprising:

a user profile that assesses user profile data associated with the operation of the one or more devices; wherein the assessed user profile data is considered in generating the at least one informational message.

301. The system of claim 300, wherein the user profile data comprises data representing one or more of an average demand and an average supply.

302. The system of claim 180, further comprising:

an event module that assesses one or more event conditions comprising one or more of power reduction warnings; national, region or local security warnings; power or energy shortage warnings; terrorist attacks; power outages; equipment outages; power system restoration; wherein the assessed one or more event conditions is considered in generating the at least one informational message.

303. The system of claim 180, further comprising:

20 an event module that identifies one or more energy curtailment mandates from an entity; wherein the one or more energy curtailment mandates is considered in generating the at least one informational message.

304. The system of claim 303, wherein the mandates are self-imposed.

305. The system of claim 180, further comprising:

an adjustment module that balances the operation of the one or more devices based at least in part on one or more of the consumption amount and the assessed supply amount.

306. The system of claim 305, wherein the operation of one or more devices is balanced

5 among one or more entities.

307. The system of claim 180, further comprising:

a feedback module that receives feedback data in response to transmission of the at least one informational message and generates at least one additional informational message in accordance with the feedback data.

10 308. The system of claim 180, further comprising:

a feedback module that receives feedback data in response to an adjustment of the at least one device and re-adjusts operation of one or more devices based at least in part on the feedback data.

309. The system of claim 180, further comprising:

15 a feedback module that receives feedback data in response to an adjustment of the at least one device; generating at least one message based on the received feedback data; and transmits the at least one message to the at least one communication device, wherein the at least one communication device is associated with at least one recipient.

310. The system of claim 308, wherein the re-adjusting is performed in response to an 20 additional at least one informational message.

311. The system of claim 308, wherein the re-adjusting comprises one or more of activating, de-activating and controlling the one or more devices.

312. The system of claim 308, wherein the feedback data comprises one or more of device level data and user level data.

313. The system of claim 308, wherein the feedback data comprises aggregate data among a plurality of entities.

5 314. The system of claim 308, wherein the feedback data comprises aggregate data independent of specific entities.

315. The system of claim 308, wherein the re-adjusting further comprises adjusting an incentive associated with the adjustment of the at least one device.

10 316. The system of claim 308, wherein the re-adjusting further comprises adjusting a price associated with a resource associated with operation of the at least one device.

317. The system of claim 180, further comprising:

a forecast module that measures at least one performance metric of the one or more devices; predicts future performance of the one or more devices based on the step of measuring; and generates the at least one informational message based at least in part on the predicted future 15 performance.

318. The system of claim 317, wherein the at least one performance metric comprises one or more of state characteristics, parameters and operating characteristics and wherein the future performance comprises one or more of future resource-consumption and future resource-production.

20 319. The system of claim 180, further comprising:

a monitor module that monitors one or more devices associated with a user, the user having a user profile identifying the one or more devices; and

a trigger event module that automatically generates the at least one informational message based at least in part on the step of monitoring.

320. The system of claim 180, further comprising:

a trigger event module that identifies at least one trigger condition for automatically initiating adjustment of one or more of resource-consumption and resource-production of the at least one device, wherein the adjustment is directed to one or more of state, use, parameter, set points, operating characteristics, duty cycle, control logic and schedule associated with the at least one device and generates the at least one informational message in response to an occurrence of the at least one trigger condition.

10 321. The system of claim 320, wherein the at least one trigger condition comprises a predetermined trigger condition defined by the user.

322. The system of claim 320, wherein the at least one trigger condition comprises a predetermined schedule of adjustments in the one or more of resource-consumption and resource-production of the at least one device.

15 323. The system of claim 320, wherein the at least one trigger condition comprises a predetermined weather condition where an occurrence of the predetermined weather condition triggers an automatic adjustment in one or more of resource-consumption and resource-production of the at least one device.

324. The system of claim 320, wherein the at least one trigger condition comprises a warning message of an imminent event forcing power adjustment.

20 325. The system of claim 320, wherein the at least one trigger condition comprises a predetermined condition involving one or more of real-time, near real-time, forward and anticipated pricing data.

326. The system of claim 325, wherein the price data comprises market price data.
327. The system of claim 320, wherein the at least one trigger condition comprises a predetermined condition involving one or more of time of day, day of week, and season data.
328. The system of claim 320, wherein the at least one trigger condition comprises a 5 predetermined condition involving current surplus and deficit resource availability data.
329. The system of claim 320, wherein the at least one trigger condition comprises a predetermined condition involving forecasted surplus and deficit capacity data.
330. The system of claim 320, wherein the at least one trigger condition comprises a predetermined condition involving a change in price of a resource with respect to a 10 predetermined threshold.
331. The system of claim 182, wherein the at least one command is from a user associated with the at least one device, the user having an associated user profile.
332. The system of claim 331, wherein the user profile defines in whole or in part an agreement between the user and an entity associated with the central server concerning a right to 15 control of the one or more devices.
333. The system of claim 331, wherein an entity reserves a right to overrule rights associated with the user in operation of the one or more devices or in response to an event.
334. The system of claim 331, wherein the user defines or modifies all or in part one or more of the user profile and a profile in which the user has been assigned one or more rights.
- 20 335. The system of claim 332, wherein the user performs the defining or the modifying over the Internet.
336. The system of claim 331, wherein the user makes available all or part of the user profile in connection with participation in a resource trading network or exchange.

337. The system of claim 336, wherein the user shares data associated with the user profile with other users.

338. The system of claim 180, wherein at least one predetermined rule is related to controlling the at least one device.

5 339. The system of claim 338, wherein the at least one predetermined rule is defined by a user associated with the one or more devices.

340. The system of claim 338, wherein the at least one predetermined rule is defined at a user interface via the Internet.

10 341. The system of claim 338, wherein the at least one predetermined rule is stored in a user profile associated with a user.

342. The system of claim 338, wherein the at least one predetermined rule comprises one or more situational rules where each situational rule is applicable for an identified circumstance.

343. The system of claim 338, wherein the at least one predetermined rule comprises a predetermined rule specific for one or more devices.

15 344. The system of claim 338, wherein the at least one predetermined rule varies in accordance with feedback data.

345. The system of claim 344, wherein the at least one predetermined rule varies situationally.

346. The system of claim 344, wherein the at least one predetermined rule varies dynamically.

20 347. The system of claim 338, wherein the at least one informational message is generated in accordance with the at least one predetermined rule.

348. The system of claim 347, wherein the at least one predetermined rule is directed to controlling one or more of one or more of state, use, one or more parameters, one or more set

points, operating characteristics, duty cycle, control logic and scheduling of the one or more devices.

349. The system of claim 348, wherein the at least one predetermined rule identifies how the one or more devices are monitored.

5 350. The system of claim 348, wherein the user defined rules comprise multiple levels of control or adjustment concerning the one or more devices.

351. The system of claim 180, wherein the at least one informational message initiates one or more actions involving activating and deactivating the at least one device or one or more components associated with the at least one device.

10 352. The system of claim 180, wherein the at least one informational message initiates one or more actions involving changing a plurality of set points; changing a plurality of parameters; changing one or more inputs to the at least one device; changing state of the at least one device; reducing an amount of resource supplied to the at least one device over a predefined time period; changing a duty cycle of the at least one device; changing a usage schedule of the at least one 15 device; changing a workload or utilization of the at least one device; changing one or more operating characteristics of the at least one device and changing programming of or software run by the at least one device.

353. The system of claim 348, wherein the at least one predetermined rule identifies one or more of when and how one or more adjustments to one or more of resource-consumption and 20 resource-production of the at least one device are made.

354. The system of claim 180, further comprising:

a user module that identifies a user type; and operates the one or more devices in a mode based on the user type during a predetermined event.

355. The system of claim 180, further comprising:

a confirmation module that receives confirmation of the action taken and informs one or more recipients of the confirmed action taken.

356. The system of claim 355, wherein the confirmation module generates at least one message based on the confirmation; and transmits the at least one message to the at least one communication device, wherein the at least one communication device is associated with at least one intended recipient.

357. The system of claim 180, further comprising:

a confirmation module that identifies one or more devices that fail to take an action in accordance with the at least one informational message and informs one or more recipients of the identified one or more devices.

358. The system of claim 178, wherein the confirmation module generates at least one message based on the step of identifying and transmits the at least one message to the at least one communication device, wherein the at least one communication device is associated with at least one intended recipient.

359. A method for managing one or more of resource-consumption and resource-production of a plurality of devices, the method comprising the steps of:

making a determination concerning one or more of resource-consumption and resource-production of one or more devices; and

transmitting at least one command to a central server, wherein the at least one command is related to controlling at least one device and is based at least in part on the determination and wherein the central server generates at least one control signal based on the at least one command for controlling the at least one device and transmits the at least one control signal to

an interface unit to take an action having an effect of providing a change of one or more of resource-consumption and resource-production attributed to the at least one device.

360. The method of claim 359, further comprising the step of:

receiving data associated with one or more of resource-consumption and resource-

5 production of the one or more devices, wherein the received data is considered in generating the at least one control signal.

361. The method of claim 359, further comprising the step of:

receiving data associated with one or more of resource-consumption and resource-

production of the one or more devices, wherein the received data is considered in generating the 10 at least one command.

362. The method of claim 359, further comprising the step of:

creating a user profile for monitoring the one or more devices wherein the user profile

comprises at least one predetermined rule for adjusting one or more of resource-consumption and resource-production of the at least one device and wherein the at least one control signal is 15 automatically generated in accordance with the at least one predetermined rule.

363. The method of claim 362, wherein the user profile comprises a model providing data describing functionality attributed to the one or more devices.

364. The method of claim 363, wherein the data comprises one or more of individual device data, aggregate data, resource-consumption data and resource-production data.

20 365. The method of claim 359, further comprising the step of:

receiving a message indicating a credit for an amount of the change of one or more of resource-consumption and resource-production of the at least one device.

366. The method of claim 359, further comprising the step of:

receiving a message indicating a confirmation of the action taken in accordance with the at least one control signal.

367. The method of claim 359, further comprising the step of:

offering an amount of the change of one or more of resource-consumption and resource-
5 production attributed to the at least one device to one or more entities.

368. The method of claim 360, wherein the step of receiving data further comprises the step of:

receiving external data affecting an operation of the at least one device wherein the external data is used to define a trigger condition for automatically generating the at least one
10 command for adjusting the resource-consumption of the at least one device.

369. The method of claim 359, further comprising the step of:

monitoring price data of a resource associated with an operation of the at least one device.

370. The method of claim 359, further comprising the step of:

15 determining whether to offer a reduction in resource-consumption based on one or more of price data and forecast data.

371. The method of claim 359, further comprising the step of:

initiating an offer to reduce resource-consumption for a predetermined amount.

372. The method of claim 371, wherein the offer is initiated when a market price for a
20 resource exceeds a predetermined level.

373. The method of claim 371, wherein the offer is initiated when a rate period for a resource changes.

374. The method of claim 362, wherein the user profile is created at the central server.

375. The method of claim 359, wherein data comprises aggregate resource consumption data for a predetermined area.

376. A system for managing one or more of resource-consumption and resource-production of a plurality of devices, the system comprising:

- 5 a determination module that makes a determination concerning one or more of resource-consumption and resource-production of one or more devices; and
- a transmitting module that transmits at least one command to a central server, wherein the at least one command is related to controlling at least one device and is based at least in part on the determination and wherein the central server generates at least one control signal based on
- 10 the at least one command for controlling the at least one device and transmits the at least one control signal to an interface unit to take an action having an effect of providing a change of one or more of resource-consumption and resource-production attributed to the at least one device.

377. The system of claim 376, wherein data associated with one or more of resource-consumption and resource-production of the one or more devices is received, wherein the

15 received data is considered in generating the at least one control signal.

378. The system of claim 376, wherein data associated with one or more of resource-consumption and resource-production of the one or more devices is received, wherein the received data is considered in generating the at least one command.

379. The system of claim 376, further comprising:

20 a user profile that enables a user to monitor the one or more devices wherein the user profile comprises at least one predetermined rule for adjusting one or more of resource-consumption and resource-production of the at least one device and wherein the at least one control signal is automatically generated in accordance with the at least one predetermined rule.

380. The system of claim 379, wherein the user profile comprises a model providing data describing functionality attributed to the one or more devices.
381. The system of claim 380, wherein the data comprises one or more of individual device data, aggregate data, resource-consumption data and resource-production data.
- 5 382. The system of claim 376, wherein a message is received indicating a credit for an amount of the change of one or more of resource-consumption and resource-production of the at least one device.
383. The system of claim 376, wherein a message is received indicating a confirmation of the action taken in accordance with the at least one control signal.
- 10 384. The system of claim 376, further comprising:
a trading module that enables a user to offer an amount of the change of one or more of resource-consumption and resource-production attributed to the at least one device to one or more entities.
385. The system of claim 377, wherein external data affecting an operation of the at least one device is received wherein the external data is used to define a trigger condition for automatically generating the at least one command for adjusting the resource-consumption of the at least one device.
- 15 386. The system of claim 376, wherein price data of a resource associated with an operation of the at least one device is monitored.
- 20 387. The system of claim 376, wherein whether to offer a reduction in resource-consumption based on one or more of price data and forecast data is determined.
388. The system of claim 376, wherein an offer to reduce resource-consumption for a predetermined amount is initiated.

389. The system of claim 388, wherein the offer is initiated when a market price for a resource exceeds a predetermined level.

390. The system of claim 388, wherein the offer is initiated when a rate period for a resource changes.

5 391. The system of claim 379, wherein the user profile is created at the central server.

392. The system of claim 376, wherein data comprises aggregate resource consumption data for a predetermined area.

393. A method for managing one or more of resource-consumption and resource-production of a plurality of devices, the method comprising the steps of:

10 receiving at least one control signal at one or more interface units wherein the at least one control signal is related to controlling at least one device; and
communicating with the at least one device in accordance with the at least one control signal, to take an action having the effect of providing a change of one or more of resource-consumption and resource-production attributed to the at least one device.

15 394. The method of claim 393, further comprising the step of:

reporting confirmation of receipt of the communication to a central server.

395. The method of claim 394, wherein the confirmation is communicated to at least one communication device associated with one or more intended recipients via a preferred mode of communication.

20 396. The method of claim 393, further comprising the step of:

reporting confirmation of the action to a central server.

397. The method of claim 396, wherein the confirmation is communicated to at least one communication device associated with one or more intended recipients via a preferred mode of communication.

398. The method of claim 393, wherein data comprising one or more of resource-
5 consumption, resource-production, device performance, device parameters, device state, device usage, exception conditions, change in resource consumption or production are measured, individually or collectively.

399. The method of claim 398, wherein the measured data is communicated to one or more intended recipients via a preferred mode of communication.

10 400. A method for managing one or more of resource-consumption and resource-production of a plurality of devices, the method comprising the steps of:

receiving at least one control signal at one or more interface units wherein the at least one control signal is related to controlling at least one device; and

15 performing one or more of displaying data and activating, de-activating, and altering one or more of an indicator and an alarm in response to the at least one control signal, to provide information associated with taking an action having the effect of providing a change of one or more of resource-consumption and resource-production attributed to the at least one device.

401. The method of claim 400, wherein the data comprises one or more of resource-
consumption, resource-production, device performance, device parameters, and change in
20 resource consumption or production.

402. A system for managing one or more of resource-consumption and resource-production of a plurality of devices, the system comprising:

a receiving module that receives at least one control signal at one or more interface units wherein the at least one control signal is related to controlling at least one device; and a communication module that communicates with the at least one device in accordance with the at least one control signal, to take an action having the effect of providing a change of 5 one or more of resource-consumption and resource-production attributed to the at least one device.

403. The system of claim 402, wherein confirmation of the receipt of the communication is reported to a central server.

404. The system of claim 403, wherein the confirmation is communicated to at least one 10 communication device associated with one or more intended recipients via a preferred mode of communication.

405. The system of claim 402, wherein confirmation of the action is reported to a central server.

406. The system of claim 405, wherein the confirmation is communicated to at least one 15 communication device associated with one or more intended recipients via a preferred mode of communication.

407. The system of claim 402, wherein data comprising one or more of resource-consumption, resource-production, device performance, device parameters, exception conditions, change in resource consumption or production are measured, individually or collectively.

20 408. The system of claim 407, wherein the measured data is communicated to one or more intended recipients via a preferred mode of communication.

409. A system for managing one or more of resource-consumption and resource-production of a plurality of devices, the method comprising the steps of:

receiving at least one control signal at one or more interface units wherein the at least one control signal is related to controlling at least one device; and

performing one or more of displaying data and activating, de-activating, and alerting one or more of an indicator and an alarm, in response to the at least one control signal, to provide

- 5 information associated with taking an action having the effect of providing a change of one or more of resource-consumption and resource-production attributed to the at least one device.

410. The system of claim 409, wherein the data comprises one or more of resource-consumption, resource-production, device performance, device parameters, and change in resource consumption or production.

- 10 411. The method of claim 1, wherein the at least one device comprises an identifier component for identifying one or more of identity, make, model, serial number, type, category, ownership, location, electronic address, operation, power requirements, resource-consumption, resource-production, power profile, adjustability, current state, current parameters associated with the at least one device to the at least one communication device.

- 15 412. The method of claim 411, wherein the power profile comprises one or more of an amount of power being drawn and when the amount of power is being drawn.

413. The method of claim 411, wherein the adjustability refers to an ability to adjust to a plurality of levels of adjustment.

- 20 414. The system of claim 180, wherein the at least one device comprises an identifier component for identifying one or more of identity, make, model, serial number, type, category, ownership, location, electronic address, operation, power requirements, resource-consumption, resource-production, power profile, adjustability, current state, current parameters associated with the at least one device to the at least one communication device.

415. The system of claim 414, wherein the power profile comprises one or more of an amount of power being drawn and when the amount of power is being drawn.

416. The system of claim 414, wherein the adjustability refers to an ability to adjust to a plurality of levels of adjustment.

5 417. A method for controlling one or more of resource-consumption and resource-production associated with a plurality of remote devices, the method comprising the steps of:

identifying at least one station from a plurality of stations for adjusting one or more of resource-consumption and resource-production associated with the at least one station;

generating a message related to one or more of resource-consumption and resource-
10 production for the at least one station; and

transmitting the message to the at least one station wherein the at least one station generates an informational message to at least one communication device where the at least one communication device enables the taking of at least one action having the effect of providing a change of one or more of resource-consumption and resource-production attributed to at least
15 one device associated with the at least one communication device.

418. The method of claim 417, wherein the message comprises a command comprising one or more of a decrease in resource-consumption and an increase in resource-production.

419. The method of claim 417, wherein the at least one communication device provides confirmation data to the at least one station in response to the taking of the at least one action.

20 420. The method of claim 419, wherein confirmation data comprises data related to one or more of compliance, non-compliance and measure of compliance.

421. The method of claim 419, wherein the at least one station gathers aggregate data concerning the change of one or more of resource-consumption and resource-production from a plurality of communication devices.

422. The method of claim 417, wherein the at least one station operates in a failure mode in 5 response to a condition wherein the condition affects operation of the at least one station.

423. The method of claim 422, wherein at least one backup station operates on behalf of the at least one station.

424. The method of claim 423, wherein the at least one backup station comprises a plurality of backup stations where each one of the plurality of backup stations rotate responsibility for the at 10 least one station in failure mode.

425. A system for controlling one or more of resource-consumption and resource-production associated with a plurality of remote devices, the system comprising:

a module that identifies at least one station from a plurality of stations for adjusting one or more of resource-consumption and resource-production associated with the at least one station 15 and generates a message related to one or more of resource-consumption and resource-production for the at least one station; and

a communication link that transmits the message to the at least one station wherein the at least one station generates an informational message to at least one communication device where the at least one communication device enables the taking of at least one action having the effect 20 of providing a change of one or more of resource-consumption and resource-production attributed to at least one device associated with the at least one communication device.

426. The system of claim 425, wherein the message comprises a command comprising one or more of a decrease in resource-consumption and an increase in resource-production.

427. The system of claim 425, wherein the at least one communication device provides confirmation data to the at least one station in response to the taking of the at least one action.

428. The system of claim 427, wherein confirmation data comprises data related to one or more of compliance, non-compliance and measure of compliance.

5 429. The system of claim 427, wherein the at least one station gathers aggregate data concerning the change of one or more of resource-consumption and resource-production from a plurality of communication devices.

430. The system of claim 425, wherein the at least one station operates in a failure mode in response to a condition wherein the condition affects operation of the at least one station.

10 431. The system of claim 430, wherein at least one backup station operates on behalf of the at least one station.

432. The system of claim 431, wherein the at least one backup station comprises a plurality of backup stations where each one of the plurality of backup stations rotate responsibility for the at least one station in failure mode.